



***DARPA*Tech**

2002 Symposium

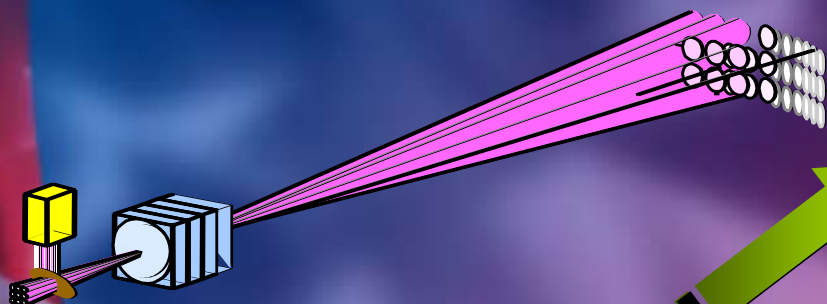
Transforming
Fantasy



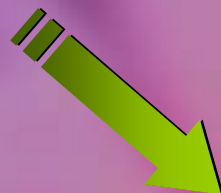
**LTC John C.
Carrano, USA**
Program Manager



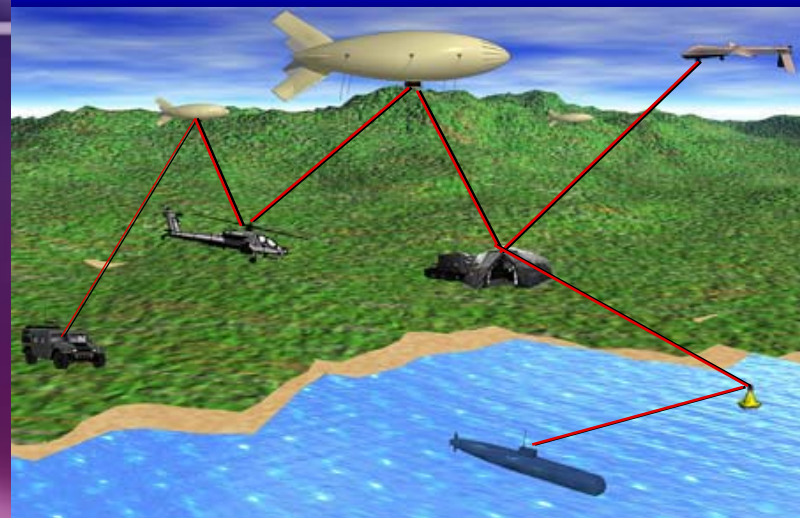
**Small, lightweight, soldier
transportable laser beam
scanning modules**



**STAB
Technologies**



Laser Communications

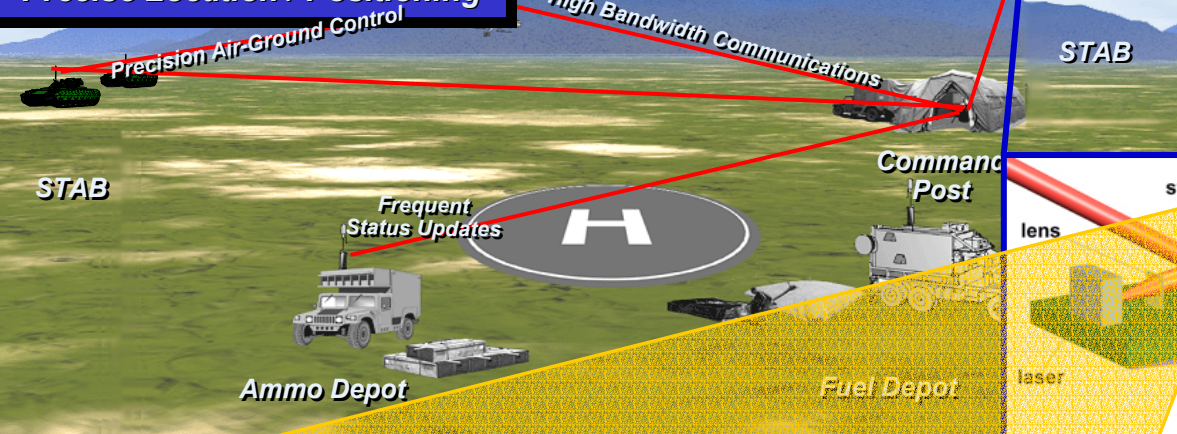


IRCM

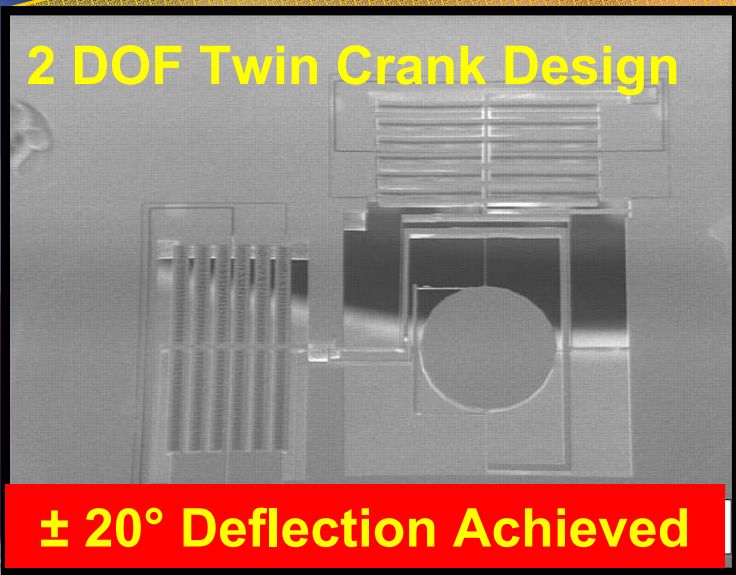


STAB Benefits Tactical Communications Networks

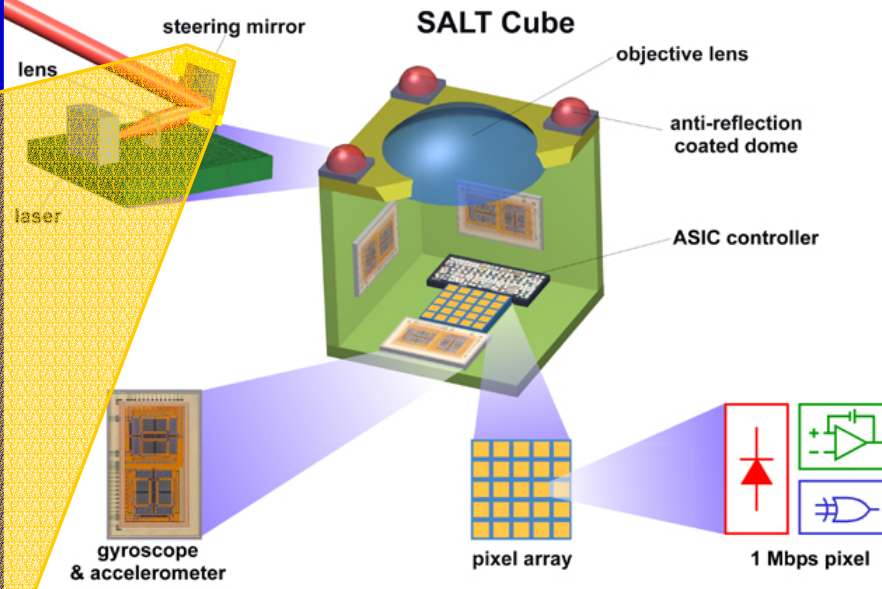
- Wide Bandwidth
- No Frequency Allocations
- Precise Location / Positioning



2 DOF Twin Crank Design



$\pm 20^\circ$ Deflection Achieved





4. Verify CM Effectiveness
and switch to other threats in cue

3. Apply Countermeasures Technique

2. Prioritize Threats in cue

1. Threat Warning - Detect, Track
and Handoff Missile Threat

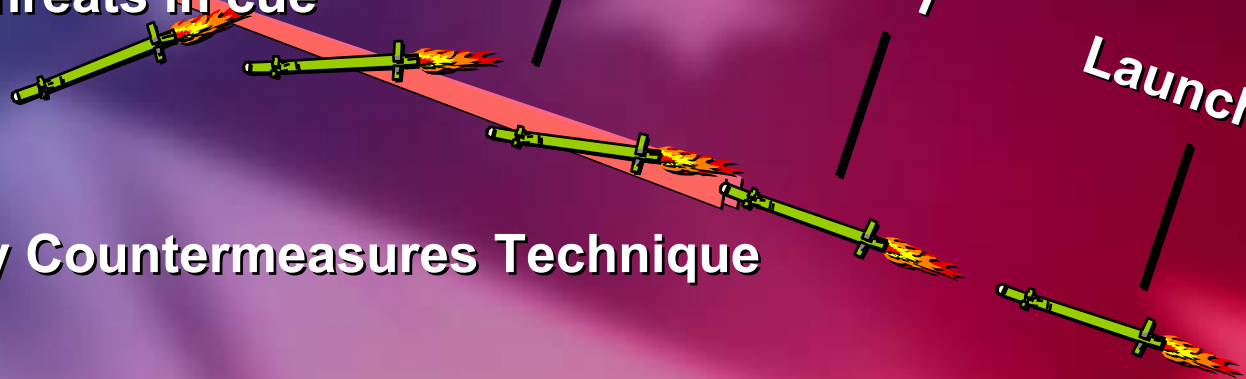
Timeline (sec)

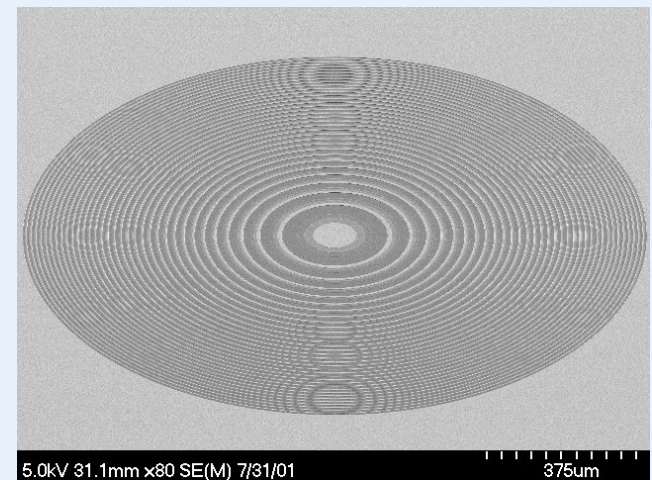
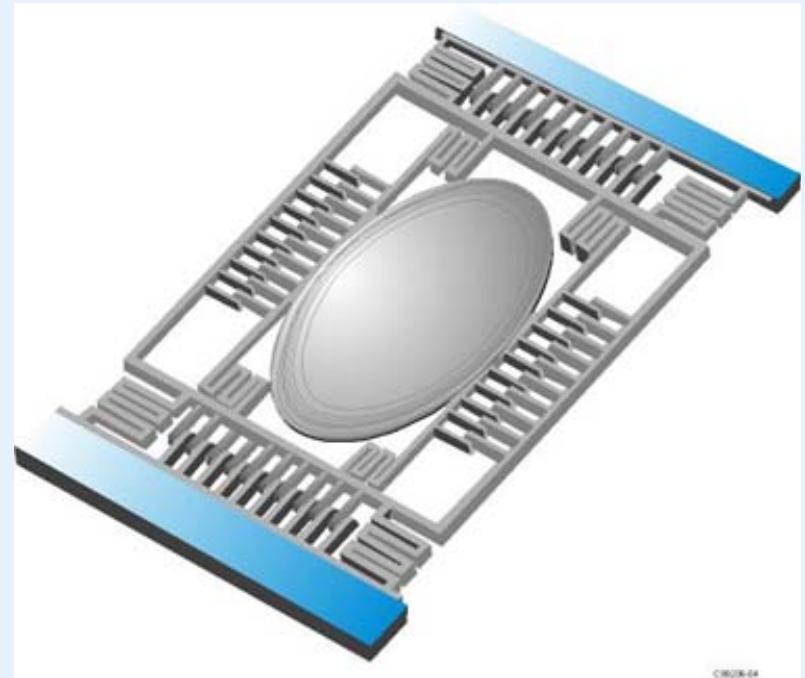
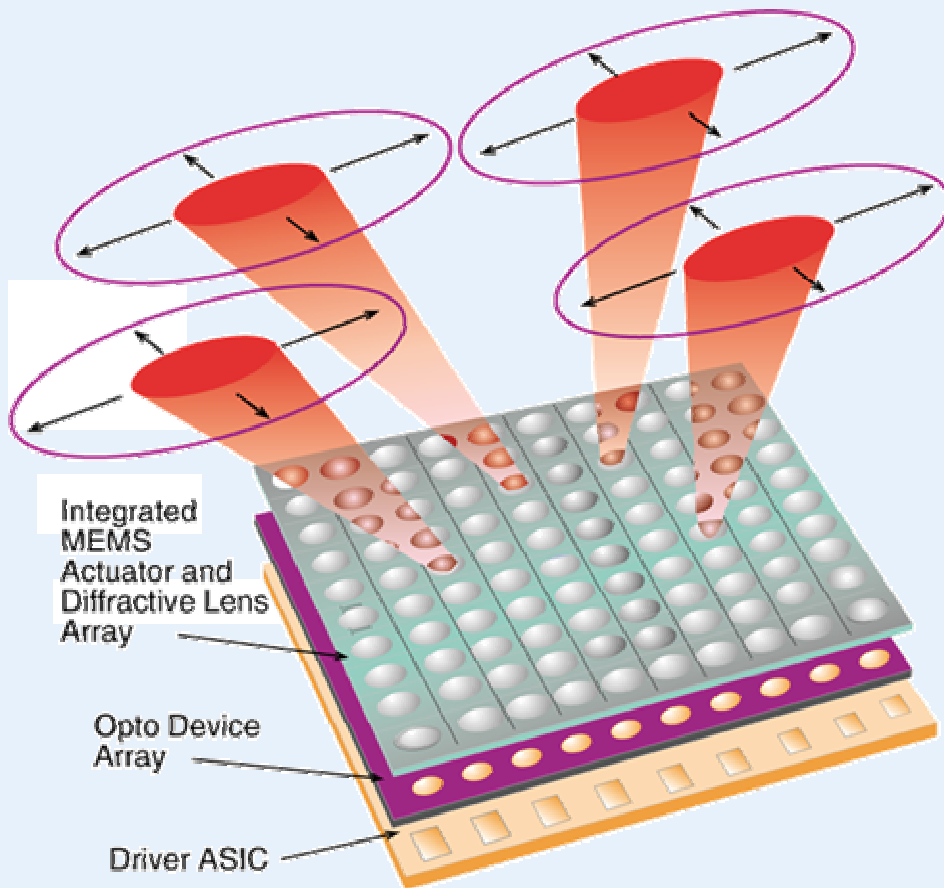
T+3

T+2

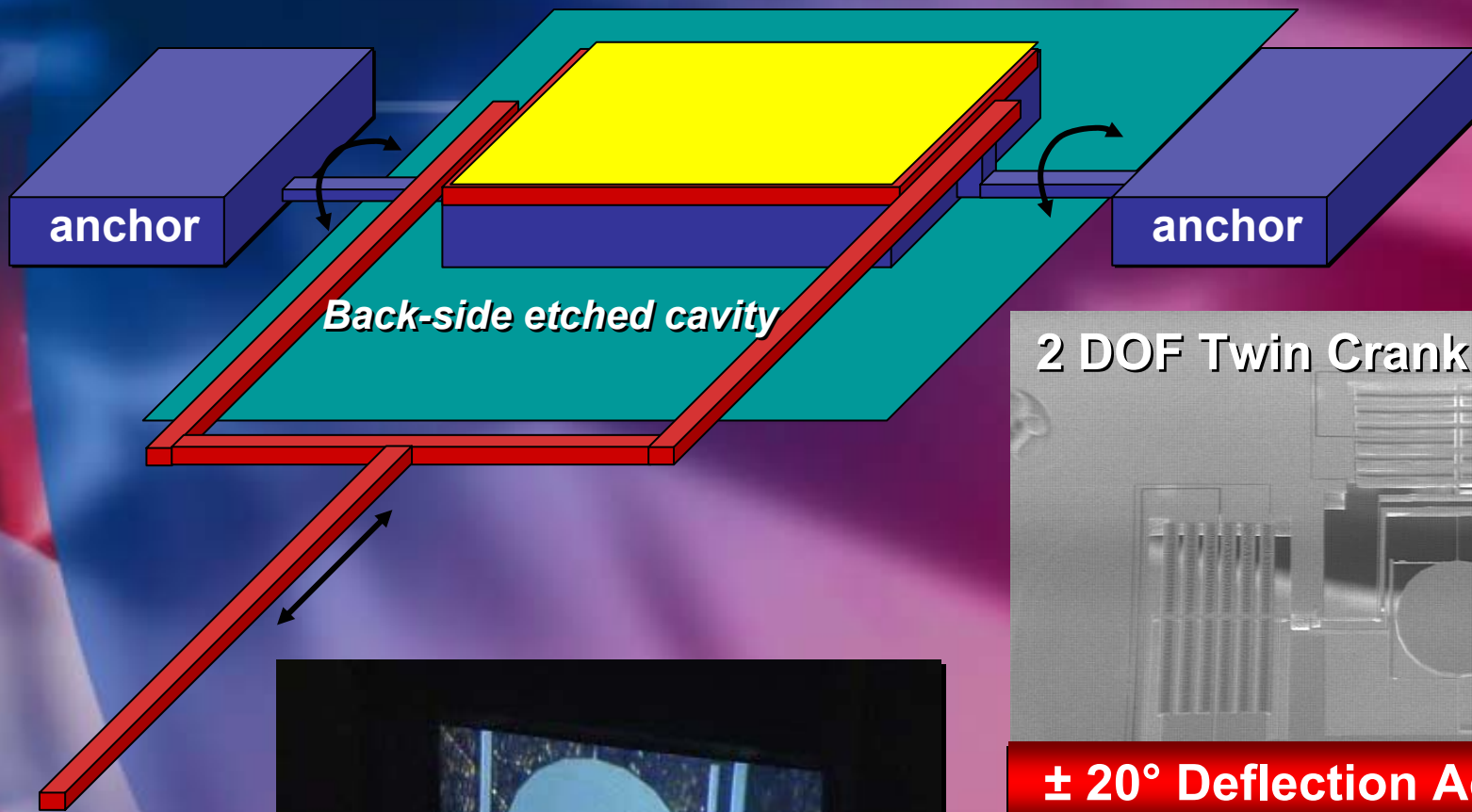
T+1

Launch

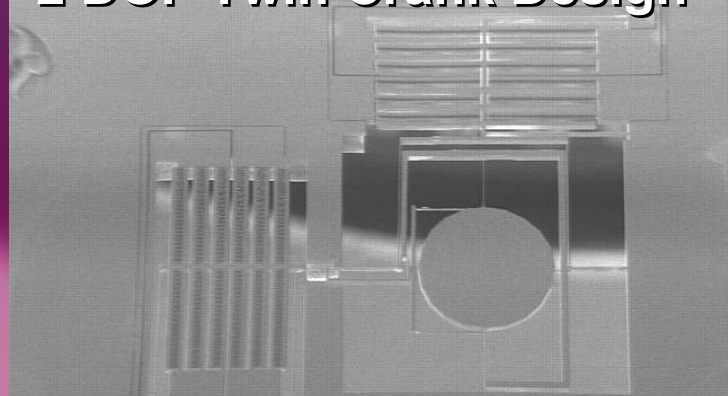




Honeywell



2 DOF Twin Crank Design

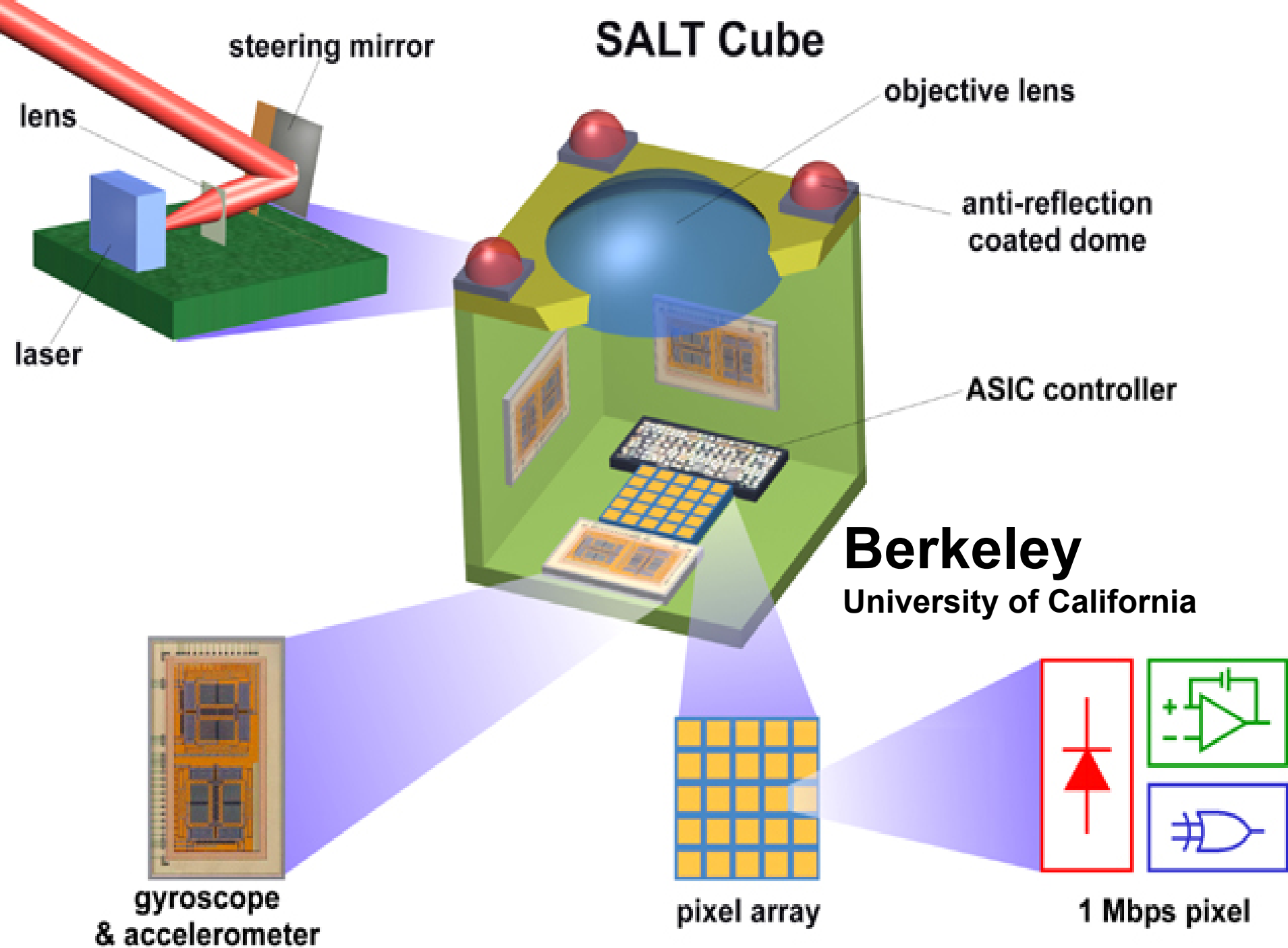


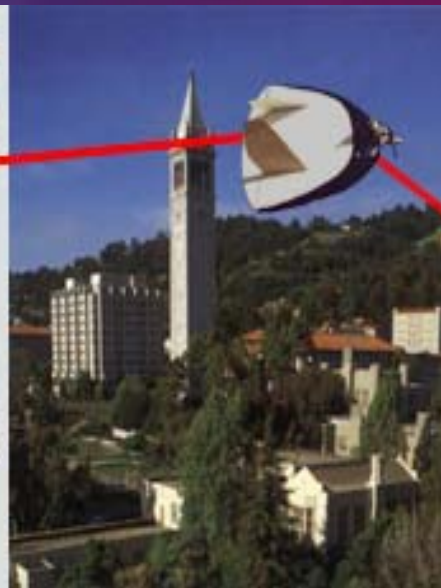
$\pm 20^\circ$ Deflection Achieved

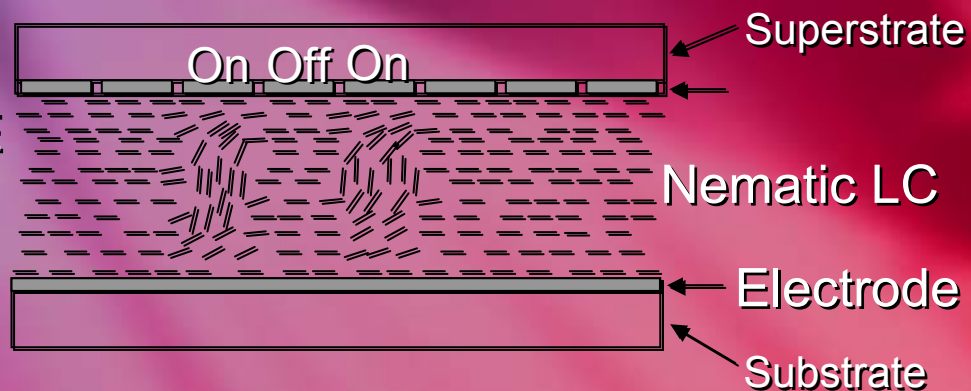
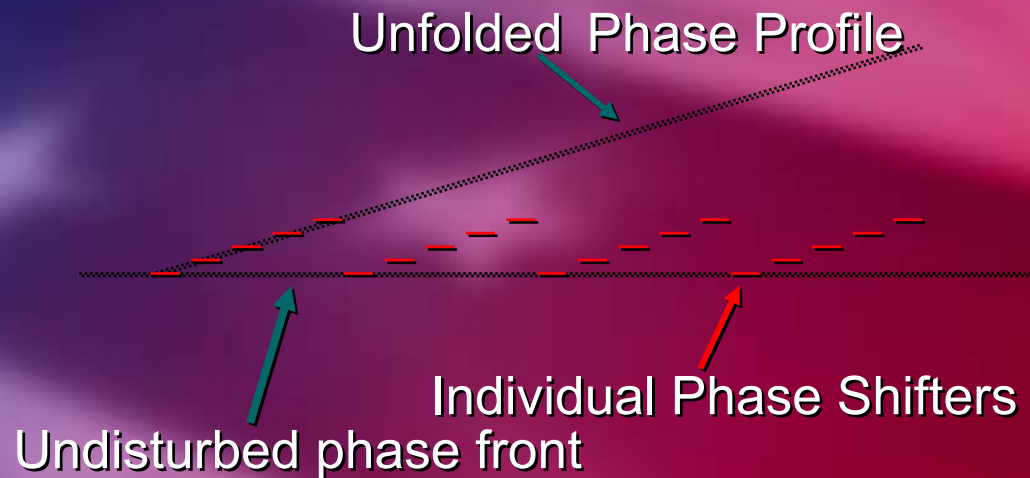
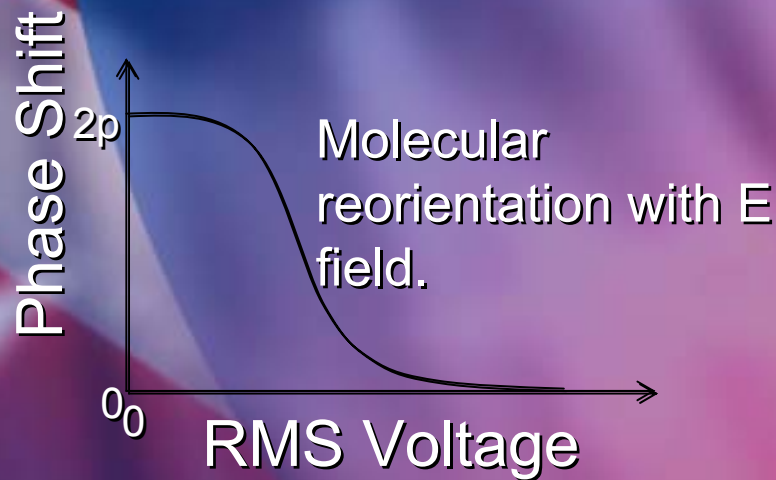
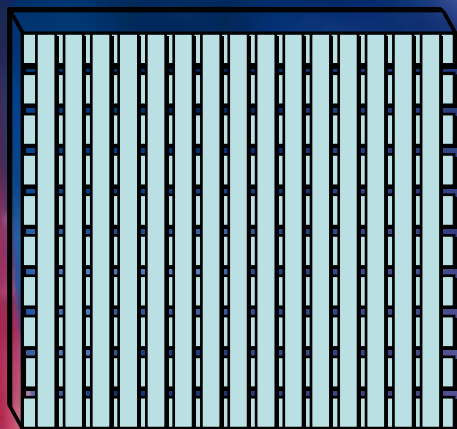


Berkeley
University of California









**Programmable
Functionality**

Variable Fanout

Field of Regard $\pm 45^\circ$

Switching
Speed
250 μ sec

Beam
Cleanup

Beam
Shaping

Zoom

Agile Field of View

Dual Polarization

Multiple Wavelength Bands

Modular
Universal Beam
Controller

Laser
Transmitter

Aperture

Receiver
(Detector Array)

T/R Diplexer

Transforming
Fantasy

Raytheon





STAB Participants



**Rockwell
Science Center**

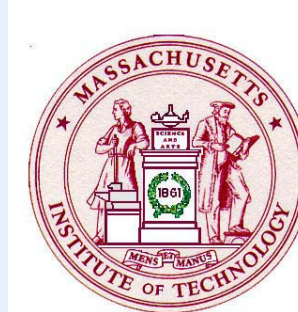
Raytheon

Berkeley
University of California

Honeywell

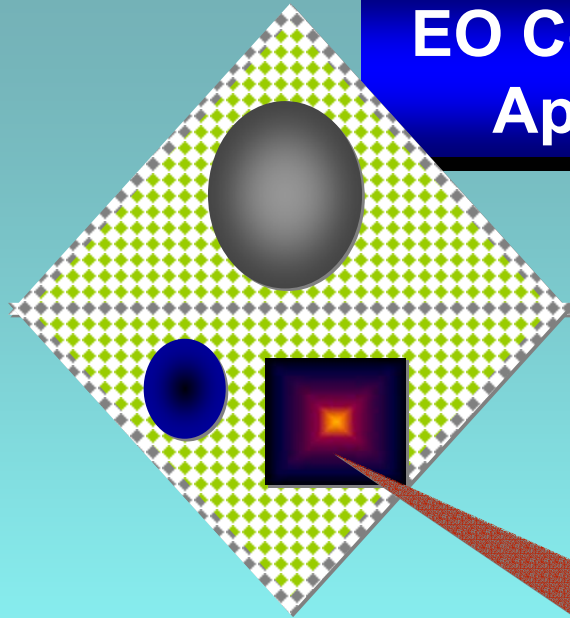


BAE SYSTEMS

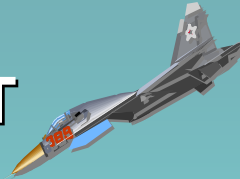


MULTI-FUNCTION ELECTRO-OPTICS FOR DEFENSE OF US AIRCRAFT

**EO Conformal
Aperture**



IRST



**Missile
Warning**



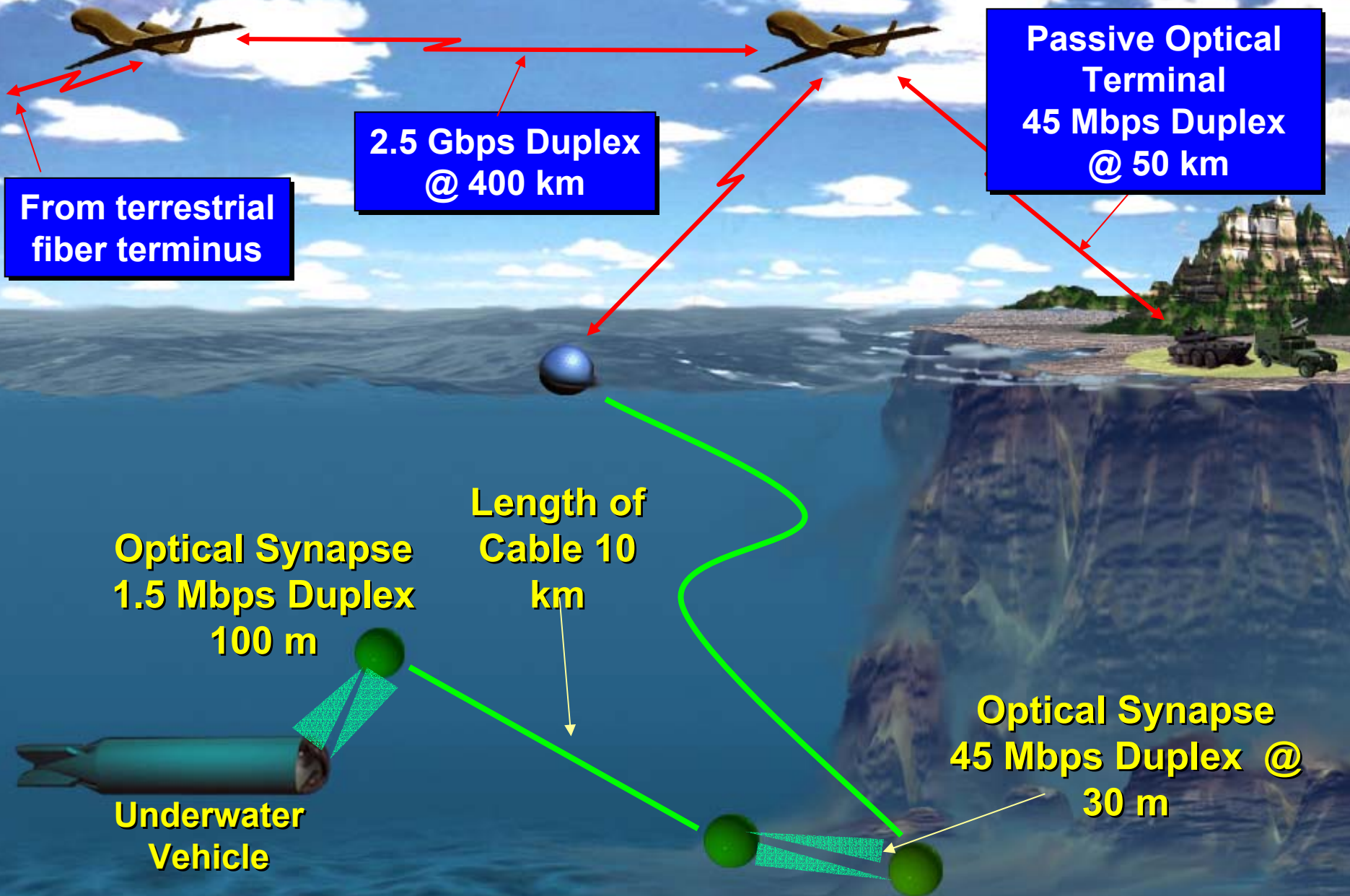
**Weapon
Handoff**

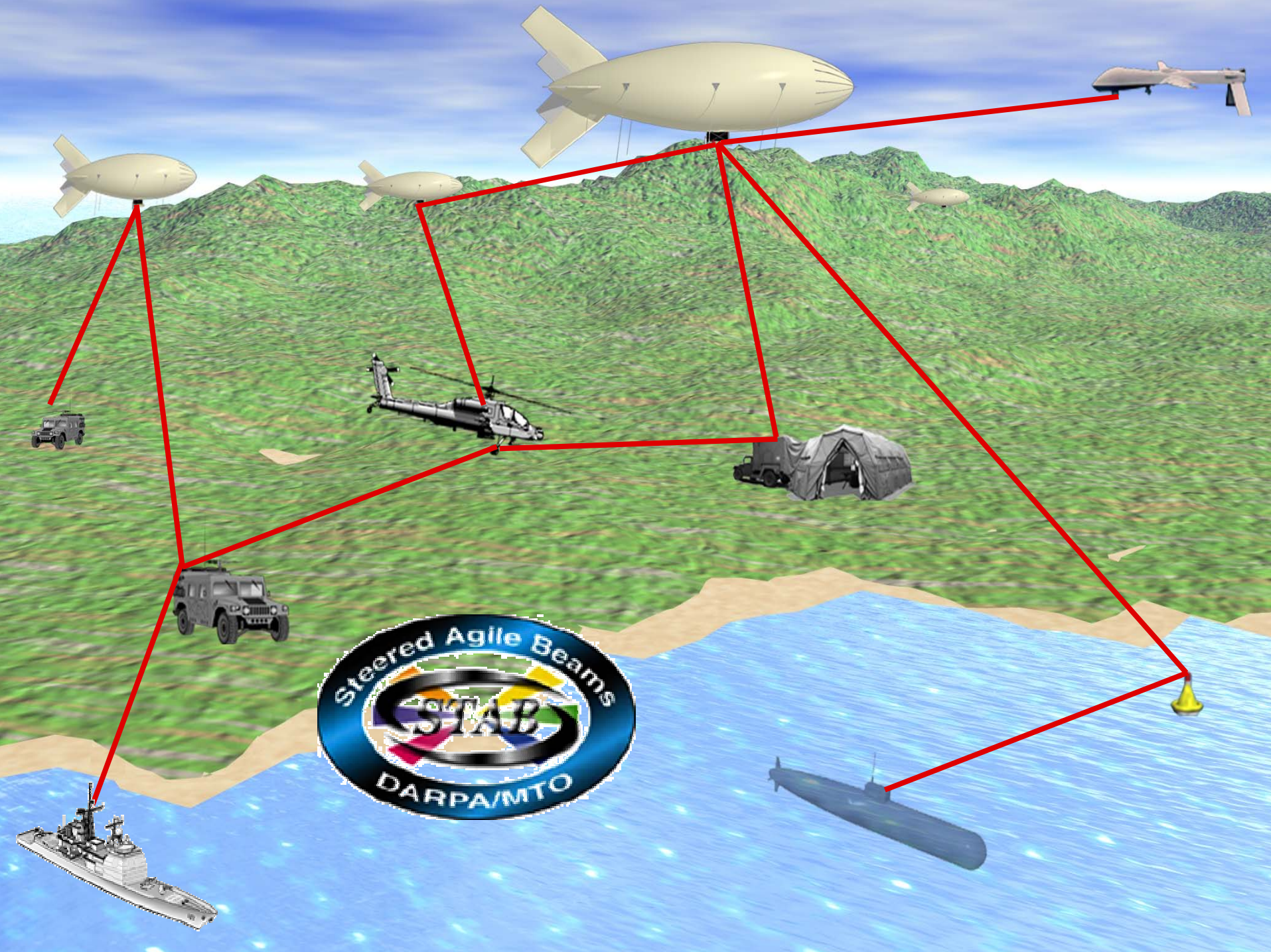


**Threat Detection &
Preemptive IRCM**

***If you look at us, you
will die!***

DARPA THOR Program







***DARPA*Tech**

2002 Symposium

Transforming
Fantasy